

CLAIMS

What is claimed is:

1. A method for providing data content to a plurality of platforms traveling in a plurality of satellite coverage regions, each platform including a mobile communications system configured for bi-directional communication with a ground segment via satellite link, said method comprising the steps of:
 - within each of the coverage regions, multicasting data content selected for the region to platforms via an associated ground station and satellite; and
 - as a platform leaves one of the coverage regions and enters another of the coverage regions, configuring the mobile communications system on the entering platform to receive the multicast in the coverage region being entered, said step being performed via the ground station associated with the coverage region being left.
2. A method in accordance with claim 1 further comprising the step of customizing data content for a regional multicast to relate to at least one of a platform provider, a geographic location and a platform destination.
3. A method in accordance with claim 1 wherein said step of multicasting data content comprises the step of multicasting video content.
4. A method in accordance with claim 1 wherein said step of multicasting data content is performed within the plurality of coverage regions using a scheduling function.

5. A method in accordance with claim 1 further comprising the step of configuring the mobile communications system to drop data content directed to platforms other than those provided by the provider of the entering platform.

6. A method in accordance with claim 1 further comprising the step of configuring the mobile communications system to accept at least a portion of the multicast data content for delivery to a user on the entering platform.

7. A method in accordance with claim 1 wherein said step of configuring the mobile communications system on the entering platform comprises the step of transmitting changes to a forwarding table of the mobile communications system.

8. A method in accordance with claim 7 wherein said step of transmitting changes to a forwarding table is performed at satellite hand-off.

9. A method in accordance with claim 1 further comprising the step of varying the data content multicasts according to coverage region.

10. A method in accordance with claim 1 wherein said step of multicasting data content comprises the step of refreshing at least a portion of data content previously received by a platform while in another coverage region.

11. A method in accordance with claim 1 wherein said step of multicasting data content comprises the step of allowing at least a portion of data content previously received by a platform while in another coverage region to expire.

12. A system for transmitting data content to a plurality of platforms traveling in a plurality of satellite coverage regions, said data content system comprising:

on each of the platforms, a mobile communications system configured for bi-directional communication with a ground segment via satellite link; for each of the coverage regions, an associated ground station and satellite configured to multicast data content to platforms in the coverage region, said associated ground station further configured to authorize, as a platform leaves the coverage region and enters another of the coverage regions, said mobile communications system of the leaving platform to receive the data content multicast in the coverage region being entered.

13. A data content transmission system in accordance with claim 12 wherein said mobile communications system on at least one of the platforms is configured to drop data content directed to platforms not provided by a provider of the at least one platform.

14. A data content transmission system in accordance with claim 12 wherein, for each of the coverage regions, said associated ground station is configured to transmit changes to a forwarding table of said mobile communications system on a platform leaving the coverage region.

15. A data content transmission system in accordance with claim 12 further comprising a network operations center configured to coordinate multicasts of data content by said ground stations in the plurality of coverage regions.

16. A data content transmission system in accordance with claim 12 further comprising, for each of the coverage regions, a data content center configured to provide multicast data content customized for the coverage region.

17. A data content transmission system in accordance with claim 12 wherein, for each of the coverage regions, said associated ground station and satellite are configured to multicast video data to users on a platform in the coverage region.

18. A method for providing data content to a platform traveling in a plurality of satellite coverage regions, the platform including a mobile communications system configured to transmit and receive data via satellite link, said method comprising the steps of:

within each of the coverage regions, multicasting, via a ground station and a satellite associated with the coverage region, data content selected for the coverage region; and

authorizing the platform mobile communications system to receive the multicast in a region into which the platform is moving, said step being performed, as the platform leaves one of the coverage regions, via the ground station associated with the coverage region being left.

19. A method in accordance with claim 18 further comprising the step of using a scheduling function to refresh the data content multicasts in each of the coverage regions.

20. A method in accordance with claim 18 wherein said step of authorizing the platform mobile communications system comprises the step of changing a forwarding table of the platform mobile communications system at satellite hand-over.